



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Zeiber

Examiner: Kevin Lee  
Art Unit: 3753

Serial No: 10/657,479

Filed: 9/8/03

For: LOW SPILL FARM COUPLING  
Docket 8195

9213 Chillicothe Road  
Kirtland, Ohio 44094

June 16, 2004

COMMISSIONER OF PATENTS  
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Alexandria, Virginia 22313-1450

**INFORMATION DISCLOSURE STATEMENT**  
**PURSUANT TO 37 C.F.R. §§1.97 AND 1.98**

Dear Sir:

A. (1) Applicant hereby discloses the following Foreign Patent Documents pursuant to  
37 C.F.R. §1.98:

	<u>Publication No.</u>	<u>Publication Date</u>	<u>Inventor</u>
1.	5,937,899	8-17-1999	Zeiber
2.	5,709,243	1-20-1998	Wells
3.	6,095,190	8-1-2000	Wilcox
4.	4,077,433	3-7-1978	Maldavs
5.	4,598,896	7-8-1986	Maldavs
6.	4,249,572	2-10-1981	Shindelar
7.	5,730,185	3-24-1998	Wilkins et al.

8.	3,730,221	5-1-1973	Viks
9.	4,745,948	5-24-1998	Wilcox
10.	4,881,573	11-21-1989	Durant
11.	6,116,277	9-12-2000	Wilcox
12.	4,582,347	4-15-1986	Wilcox
13.	3,981,479	9-21-1976	Foster
14.	4,086,939	5-2-1978	Wilcox
15.	4,303,098	12-01-1981	Shindelar

B. Copies of the patents and literature are included herewith pursuant to 37 C.F.R. §1.98.

C. Explanation of Relevance pursuant to 37 C.F.R. §1.98.

1. U.S. Patent No. 5,937,899 to Zeiber discloses a female cartridge which is retained within a manifold. Axial and radial vent valves are disclosed. The '899 patent provides a male half of the coupling which pushes the inner body of the pressurized female half of the coupling (which includes a pressurized chamber between a piston and a relief valve positioning member) causing the positioning member to be displaced in a leftward or rearward direction which causes the venting of the female member. The male half of the coupling pulls the inner body of the female half of the coupling rightwardly or forwardly which causes the venting of the female member. The venting occurs when the male and female halves of the coupling are connected or disconnected.

2. U.S. Patent No. 5,709,243 to Wells et al. discloses a low spill female coupling.

A valve having an enlarged head is adapted to receive a male valve from the male half of the coupling such that the valves remain closed until respective parts thereof are brought into contact with each other so as to minimize spillage.

3. U.S. Patent No. 6,095,190 to Wilcox et al. discloses a female coupling half having internal pressure relief. The female half has three valves: a main valve, a relief valve and a sliding sleeve valve. The relief valve is a ball and seats against an elastomeric seal mounted on the back side of the main valve. A push pin having flat edges operates the relief valve.

4. U.S. Pat. No. 4,077,433 to Maldavs illustrates a piston valve arrangement with a passageway through the valve to assist in assuring that the male ball valve remains open in high flow conditions from the male to the female.

5. U.S. Pat. No. 4,598,896 to Maldavs illustrates a coupler having a spool and a port within the spool. An annular seal is fixedly positioned about the port in the spool. The spool is slidable with respect to the seal which enables pressure to be relieved in the female during coupling and uncoupling with the male.

6. U.S. Pat. No. 4,249,572 to Shindelar et al. discloses a female half which is self-relieving. The female half includes dual poppet valves which are linked together. One of the poppet valves vents the female half of the coupling when the male and female valves are disengaged and uncoupled.

7. U.S. Pat. No. 5,730,185 to Wilkins et al. discloses a coupling wherein certain positions of the adaptor allow the venting of the dispenser half and the receptacle half.

Venting is prohibited by the movement of seals relative to ports and passageways.

8. U.S. Pat. No. 3,730,221 to Vik provides an exterior vent valve.

9. U.S. Pat. No. 4,745,948 to Wilcox et al. discloses a coupling device which utilizes locking detents which lock a stem against the male valve which prevents reverse flow checking.

10. U.S. Pat. No. 4,881,573 to Durant illustrates a coupler having two poppet valves. The first poppet engages a ball check valve formed in the male coupling and the second poppet is actuated by a manually operated cam. A passageway exists in the piston to allow fluid to be vented or to pressurize the female valve.

11. U.S. Pat. No. 6,116,277 to Wilcox discloses a farm coupling.

12. U.S. Pat. No. 4,582,347 to Wilcox discloses a combination detent and threaded quick disconnect.

13. U.S. Pat. No. 3,981,479 to Foster discloses a check valve in a coupling.

14. U.S. Pat. No. 4,086,939 to Wilcox discloses a coupling assembly.

15. U.S. Pat. No. 4,303,098 to Shindelar discloses a coupler having a female half which includes a female valve having an elongated stem for engaging the male half. The female half of the coupling is vented by a pivotable cam which moves the inner member of the female half to release its locking means and then opens a poppet valve to open the outlet port.

No fee is believed due as this information disclosure statement is being timely filed. Please charge deposit account 23-3060 if any fee deficiency exists.

Respectfully submitted,

WOODLING, KROST & RUST



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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

### Complete if Known

Application Number	10/657,479
Filing Date	9/8/03
First Named Inventor	ZEIBER
Art Unit	3753
Examiner Name	LEE
Attorney Docket Number	8195

### U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		US- 5,937,899	08-17-1999	ZEIBER	ENTIRE DOCUMENT
		US- 5,709,243	01-20-1998	WELLS	ENTIRE DOCUMENT
		US- 6,095,190	08-01-2000	WILCOX	ENTIRE DOCUMENT
		US- 4,077,433	03-07-1978	MALDAVS	ENTIRE DOCUMENT
		US- 4,598,896	07-08-1986	MALDAVS	ENTIRE DOCUMENT
		US- 4,249,572	02-10-1981	SHINDELAR	ENTIRE DOCUMENT
		US- 5,730,185	03-24-1998	WILKINS	ENTIRE DOCUMENT
		US- 3,730,221	05-01-1973	VIKS	ENTIRE DOCUMENT
		US- 4,745,948	05-24-1998	WILCOX	ENTIRE DOCUMENT
		US- 4,881,573	11-21-1989	DURANT	ENTIRE DOCUMENT
		US- 6,116,277	09-12-2000	WILCOX	ENTIRE DOCUMENT
		US- 4,582,347	04-15-1986	WILCOX	ENTIRE DOCUMENT
		US- 3,981,479	09-21-1976	FOSTER	ENTIRE DOCUMENT
		US- 4,086,939	05-02-1978	WILCOX	ENTIRE DOCUMENT
		US- 4,303,098	12-01-1981	SHINDELAR	ENTIRE DOCUMENT
		US-			

### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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